Курсовой проект

По дисциплине:
Автоматизированные информационно-управляющие системы

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Тема и задание.

Тема:

Разработка программно-алгоритмических средств для исследования профильных методов классификации текстовых документов.

Задание:

Изучение литературы по языку программирования c#.

Скачивание электронных версий журналов.

Обработка научных статей.

Библиографическое описание статьи

Numerical investigation of particle transport characteristics in an isolated room with single-sided natural ventilation

Abstract

Single-sided natural ventilation has been common in multi-family residential buildings. Current research usually presumes that the outdoor air is clean, which is not realistic under the outdoor pollution situations. In this study, the particle transport and airflow pattern in an isolated living room with the single-sided natural ventilation are numerically investigated by means of Eulerian drift-flux model combined with the Eulerian fluid method. The results indicate that larger wind speed does not necessarily achieve better ventilation effect and higher air change rate (ACH). At high wind speeds, the effect of wind direction on the room average concentration becomes more conspicuous. Small particles tend to disperse in the room more uniformly while large particles exhibit stratified distributions. The results would be useful for optimizing single-sided natural ventilation in buildings.

Keywords

single-sided ventilation particle transport Eulerian deposition

Библиографическое описание - краткое содержание публикации, включающее в себя: название статьи, аннотацию, ключевые слова, авторов, литературы и др.

Примеры выполнения программы:

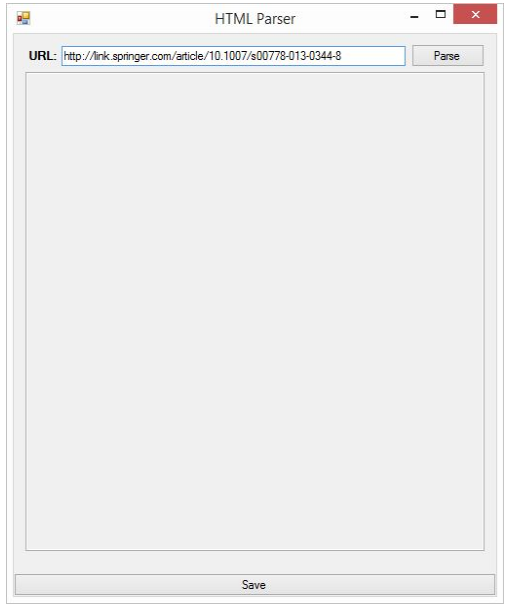
Correlated network data publication via differential privacy

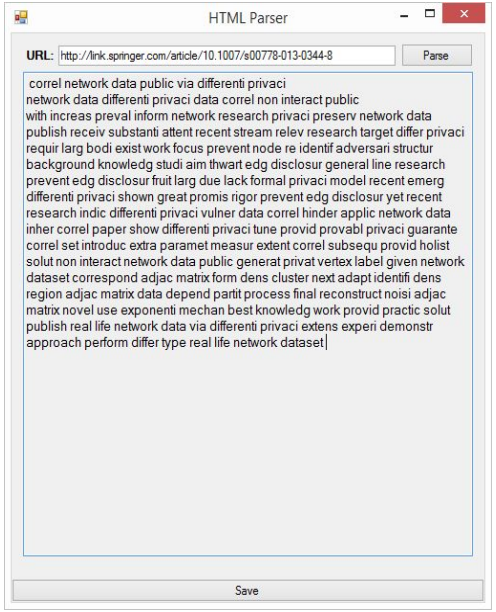
Abstract

With the increasing prevalence of information networks, research on privacy-preserving network data publishing has received substantial attention recently. There are two streams of relevant research, targeting different privacy requirements. A large body of existing works focus on preventing node re-identification against adversaries with structural background knowledge, while some other studies aim to thwart *edge disclosure*. In general, the line of research on preventing edge disclosure is less fruitful, largely due to lack of a formal privacy model. The recent emergence of *differential privacy* has shown great promise for rigorous prevention of edge disclosure. Yet recent research indicates that differential privacy is vulnerable to *data correlation*, which hinders its application to network data that may be inherently correlated. In this paper, we show that differential privacy could be tuned to provide provable privacy guarantees even in the correlated setting by introducing an extra parameter, which measures the extent of correlation. We subsequently provide a holistic solution for *non-interactive* network data publication. First, we generate a private vertex labeling for a given network dataset to make the corresponding adjacency matrix form dense clusters. Next, we adaptively identify dense regions of the adjacency matrix by a data-dependent partitioning process. Finally, we reconstruct a noisy adjacency matrix by a novel use of the exponential mechanism. To our best knowledge, this is the first work providing a practical solution for publishing real-life network data via differential privacy. Extensive experiments demonstrate that our approach performs well on different types of real-life network datasets.

Keywords

Network data Differential privacy Data correlation Non-interactive publication





Спасибо за внимание!